PLAGUE – PANDEMIC – PANIC

Information Needs and Communication Strategies

for Infectious Diseases Emergencies

Lessons learned from Anthrax, SARS,
Pneumonic Plague and Influenza Pandemic

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24th January 2011

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Content

Concept Idea, background and methodology

Systematic Literature Review of published data on public behaviour during infectious diseases emergencies

Empirical Investigation Information Needs of the public during swine flu

Recommendations Communication strategies

Concept |

Initial

Starting question

1. What is the behaviour of the public during infectious diseases emergencies?
   - And during bioterrorist attacks?
   - What do we know: what data is available?

2. What information needs have the public?

Initial

Background

Public is suspected to prone to panic

This would result in

1) Stretch Medical Infrastructure (Affected and ‚worried well')
2) Raised infection risk due to inappropriate behaviour

Initial

Concept

What data is peer reviewed published?

→Systematic Literature Review

What are the information needs of the public during infectious diseases outbreaks?

→ Empirical Investigation at Frankfurt International Airport during *the first days* of swine flu

Literature |

Review

Contributed to a research study King‘s College London, Institute of Psychiatry (IoP) for the British Home Office

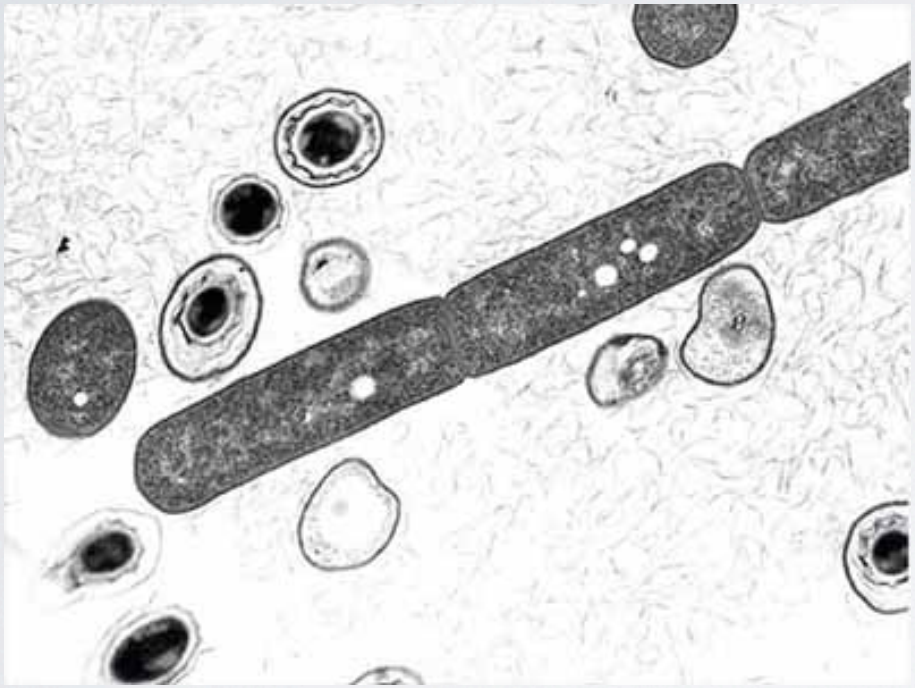
Concept

3 outbreaks of infectious diseases as matrix:

1) **Anthrax** 2001 – Bioterrorism
2) **SARS** 2003 – New emerging disease
3) **Pneumonic Plague** 1994 – re-emerging disease with bioterrorist potential

Anthrax |

Review



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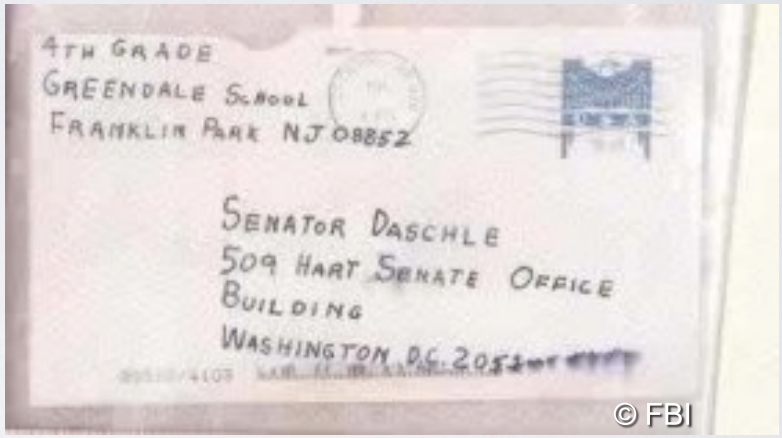

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Anthrax |

Medical infrastructure

- Minimal increase of frequency: 1-2%

Antibiotics

- Minimal increase of presciption (4%); no *data* whether people took them (estimate 0,5%)

Hotlines and internet

- High demand (for general information)

Anthrax

Results

- Mode of Transmission (not h-t-h)
- Availability for prophylaxis and treatment
- ‚Objects' or ‚Token' (white powder)
- Transparent Information policy

→ Led to rational behaviour of the public: no irrational demand for health care services

SARS |

SARS

- High infectious rate among health care workers
- Hospitals were considered as sources of infection (Canada and Taiwan)

→Decreased frequency of hospital -44% (non-SARS related Diseases)

→Increase of suspect cases, 88% „Low risk patients“

SARS

Results

- Way of transmission (h-t-h) and lack of prophylaxis and treatment

→ Highly concerned public

- Telephone hotlines and Internet

→ reduced the flow of ‘low risk’ patients

- Negative effect of not using medical health services

Pneumonic Plague |


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Pneumonic Plague

Incident

- 1994 Outbreak of Pneumonic Plague in India
- Few information
- Health System
- Culture

Pneumonic Plague

Incident

- Mass large-scale spontaneous surge of people away from the city
- Major response of the health system

Literature Review

Results

- Way of transmission
- Medical Competence (Prophylaxis, treatment)
- Information Policy

are key factors that indicate effective management of infectious disease outbreak

Literature Review

Recommendations

- Clear, consistent and transparent information
- Triage
- Follow-up

Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science
Volume 8, Number 1, 2010 © Mary Ann Liebert, Inc.
DOI: 10.1089/bsp.2009.0059

How to Reduce the Impact of "Low-Risk Patients" Following a Bioterrorist Incident: Lessons from SARS, Anthrax, and Pneumonic Plague

G. James Rubin and Petra Dickmann

A bioterrorist attack may result in a large number of people who have not been exposed coming to medical facilities in search of treatment or reassurance. In this article, we review evidence from 3 previous biological incidents that are analogous to a bioterrorist attack in order to gauge the likely incidence of such "low-risk patients" and to identify possible strategies for coping with this phenomenon. Evidence from the anthrax attacks in the United States suggested that a surge of low-risk patients is by no means inevitable. Data from the SARS outbreak illustrated that if hospitals are seen as sources of contagion, many patients with non-bioterrorism-related healthcare needs may delay seeking help. Finally, the events surrounding the pneumonic plague outbreak of 1994 in Surat, India, highlighted the need for the public to be kept adequately informed about an incident. Although it is impossible to say what the likely incidence of low-risk patients will be during a future bioterrorist incident, several strategies may help to reduce it and to safeguard the well-being of the low-risk patients themselves. These strategies include providing clear information about who should and should not attend hospital; using telephone services to provide more detailed information and initial screening; employing rapid triage at hospital entrances, based, where possible, on exposure history and objective signs of illness; and following up by telephone those judged to be at low risk.

Rubin GJ & Dickmann P (2010). How to reduce the impact of "low risk patients" following a bioterrorist incident. Lessons from SARS, anthrax and pneumonic plague. *Biosecurity and Bioterrorism*, 8, 37-43.

Influenza |

Influenza

Empirical Investigation of Information Needs and Communication Strategies

(University Hospital Frankfurt; Public Health Authorities Frankfurt; King's College London)

Interviews at Frankfurt Airport (April 29-30, 2009) asking

- travellers from and to Mexico and
- airport staff

about their **information needs** and their **level of anxiety**

Influenza

Assumptions

Information and communication is critical to the successful management of infectious diseases.

An effective communication strategy prevents

- the surge of low risk patients affecting medical infrastructures
- future transmission of the infectious agent

Influenza

Direct Relation between Anxiety - Information

Passengers who had a **high fear level** typically reported continuing **information needs** whereas passengers with a low or moderate fear level reported that they had sufficient information

Information – Exposure – Fear Level

No significant relation between fear level and actual or potential exposure. **Lack of information was associated with anxiety, irrespective of exposure**

Influenza

Neglected Group: Employees

While travellers were well informed the communication strategy failed to address the staff

Health Staff

Were perceived as authentic and trustworthy source of information

Influenza

Implications

Anxiety – Information – Exposure

Public is often suspected to panic – the opposite is the fact.

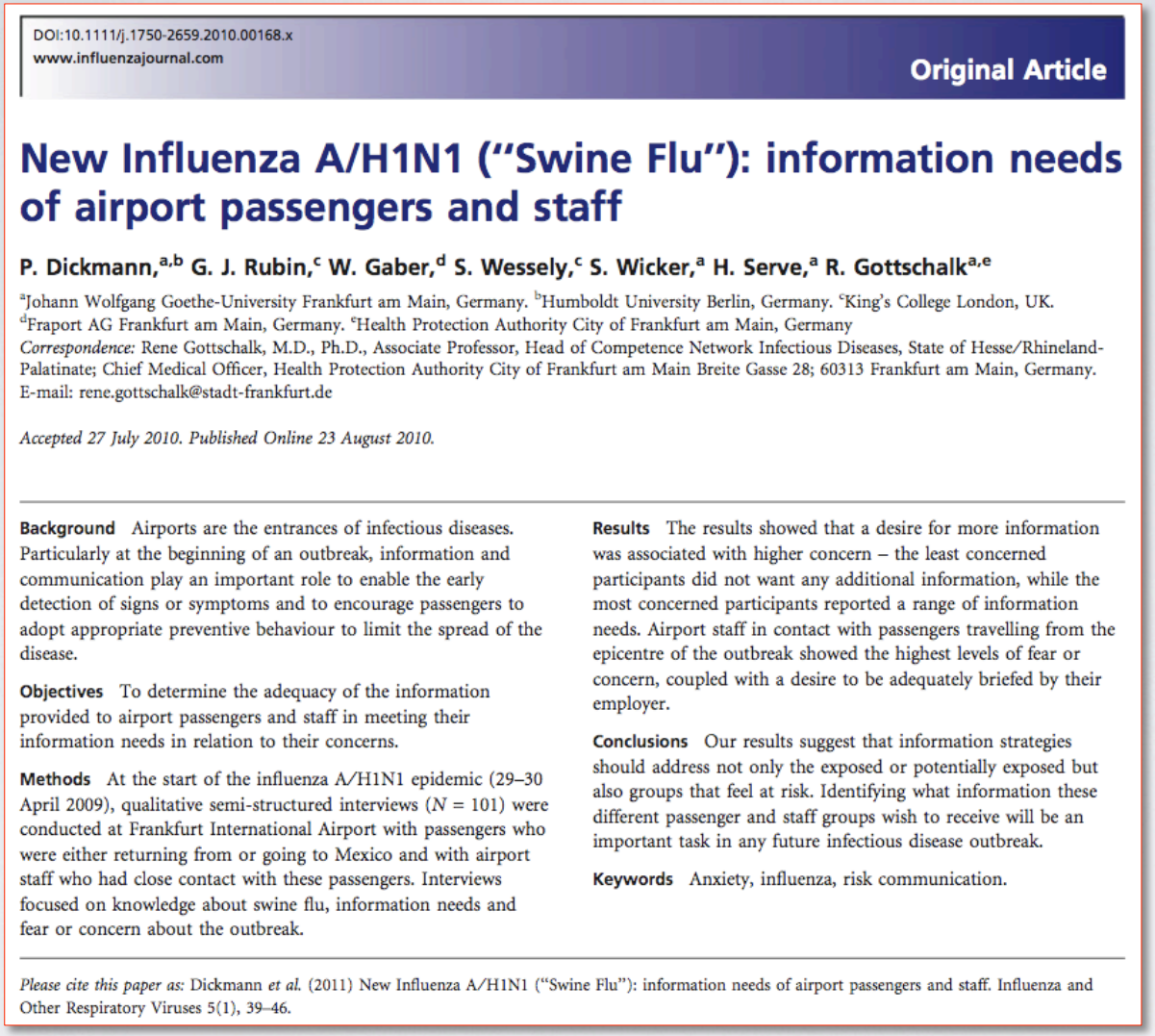
The more people feel informed the more they behave rationally – regardless the scientific assessment of risk and exposure

Start with your own staff!

Influenza

Results

- **Timely** and **transparent information policy**
- **Information Need irrespective of objective exposure and scientific assessment**
- Start with your own staff



DOI:10.1111/j.1750-2659.2010.00168.x
www.influenzajournal.com

Original Article

New Influenza A/H1N1 ("Swine Flu"): information needs of airport passengers and staff

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Accepted 27 July 2010. Published Online 23 August 2010.

Background Airports are the entrances of infectious diseases. Particularly at the beginning of an outbreak, information and communication play an important role to enable the early detection of signs or symptoms and to encourage passengers to adopt appropriate preventive behaviour to limit the spread of the disease.

Objectives To determine the adequacy of the information provided to airport passengers and staff in meeting their information needs in relation to their concerns.

Methods At the start of the influenza A/H1N1 epidemic (29–30 April 2009), qualitative semi-structured interviews ($N = 101$) were conducted at Frankfurt International Airport with passengers who were either returning from or going to Mexico and with airport staff who had close contact with these passengers. Interviews focused on knowledge about swine flu, information needs and fear or concern about the outbreak.

Results The results showed that a desire for more information was associated with higher concern – the least concerned participants did not want any additional information, while the most concerned participants reported a range of information needs. Airport staff in contact with passengers travelling from the epicentre of the outbreak showed the highest levels of fear or concern, coupled with a desire to be adequately briefed by their employer.

Conclusions Our results suggest that information strategies should address not only the exposed or potentially exposed but also groups that feel at risk. Identifying what information these different passenger and staff groups wish to receive will be an important task in any future infectious disease outbreak.

Keywords Anxiety, influenza, risk communication.

Please cite this paper as: Dickmann *et al.* (2011) New Influenza A/H1N1 ("Swine Flu"): information needs of airport passengers and staff. Influenza and Other Respiratory Viruses 5(1), 39–46.

Dickmann P, Rubin GJ, Gaber W, Wessely S, Wicker S, Serve, H & Gottschalk R (2011). New influenza A/H1N1 ("swine flu"): Information Needs of Airport Passengers and Staff. *Influenza and Other Respiratory Diseases*, 5, 39-46.

Communication |

Communication | Risk and Crisis

Risk Communication

Any communication BEFORE a crisis

Crisis Communication

Any communication DURING a crisis

Communication | Risk and Crisis

Crisis

Individual involvement in a developing situation

which tends to require another communication style

Crisis Communication

Short, order-style, reduced, clear command control

Communication | Risk and Crisis

Risk – science based approach

Deals with expert opinions, probabilities

Risk - individual approach

Personal risk *perception*

Communication

Principles

- Transparency
- Proactive Distribution of Information and public engagement

Petra Dickmann et al. (2009) **Risk Communication for BSL4 Laboratories**, in: *Biosecurity and Bioterrorism*, June 2009, 7(2): 227-233.

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